GORYNSKI, Tomasz

Principles for surgical therapy of congenital hip subluxation in adults.
Chir. narzad. ruchu ortop. pol. 27 no.3:431-437 '62.

1. Z Kliniki Ortopedycznej AM w Warszawie Kierownik: prof. dr A. Gruca.
(HIP DISLOCATION)

GORYNSKI, Tomas; WITWICKI, Tadeusz

Difficulties and errors in the diagnosis of Ewing's sarcoma
according to data from the Orthopedic Clinic of the Academy
of Medicine in Warsaw. Chir. narzad. ruchu ortop. pol. 28
no.5:523-528 '63.

1. Z Kliniki Ortopedycznej AM w Warszawie. Kierownik: prof.
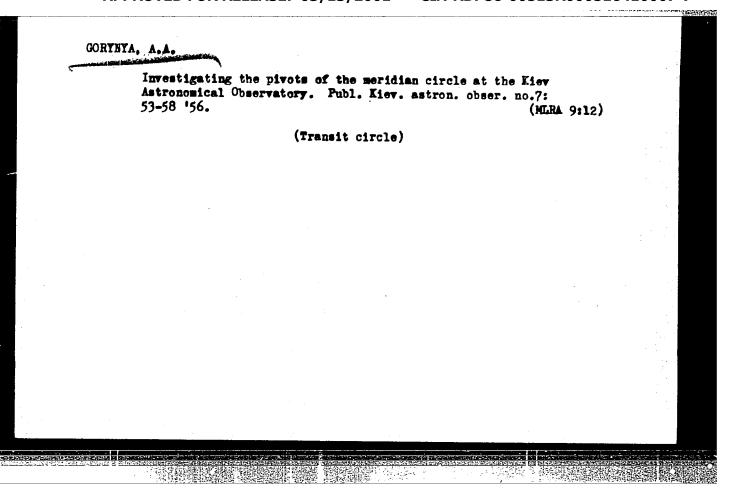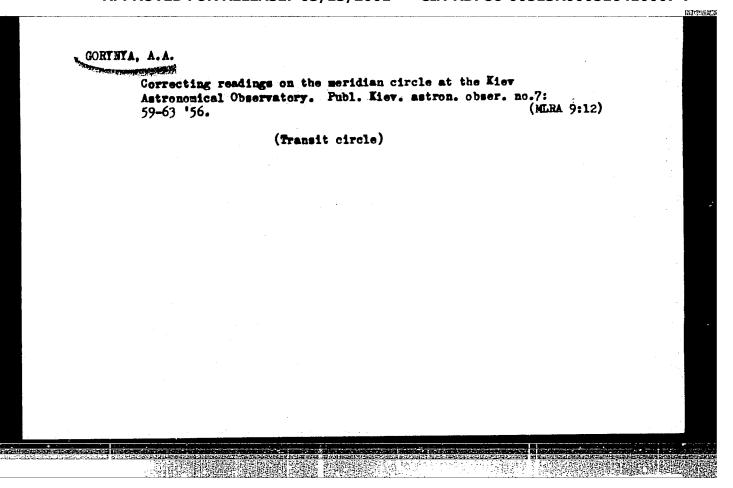dr. A.Gruca.

CHALOV, A. (g. Tashkent); TSUTSKOV, S.; VASIL'YEV, V. (g. Sverdlovsk);
    GORYNTSEV, F. (g. Sverdlovsk)

    Repaired by amateurs. Radio no.5:46 My '61.   (MIRA 14:7)
        (Radio—Repairing)   (Television—Repairing)

GORYNYA, A.A.

GORYNYA, A.A.

Catalog of declinations of 585 faint stars in the FK3 system
observed on the transit circle at the Kiev Astronomical Observa-
tory. Trudy KAO 1:3-79 '56.   (MLRA 10:9)
           (Stars--Catologs)   (Transit circle)

GORYBYA, A.A.

Investigating the pivots of the meridian circle at the Kiev
Astronomical Observatory. Publ. Kiev. astron. obser. no.7:
53-58 '56.   (MLRA 9:12)

(Transit circle)

GORYNYA, A.A.

Correcting readings on the meridian circle at the Kiev
Astronomical Observatory. Publ. Kiev. astron. obser. no.7:
59-63 '56.   (MLRA 9:12)

(Transit circle)

32039
S/035/61/000/011/002/028
A001/A101

3, 2570 (1080)

AUTHORS: Yakovkin, A.A., Gorynya, A.A.

TITLE: Reduction of lunar observations onto the baricentric sphere

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 11, 1961, 10, abstract 11A90 ("Tr. 14-y Astrometr. konferentsii SSSR, 1958", Moscow-Leningrad, AN SSSR, 1960, 398-403, Discuss. 403, Engl. summary)

TEXT: The authors analyze the possibility of approximating the shape of the Moon by means of the smoothing curve of the following form:

$$r = R_0 + a\cos^4(p + \gamma)$$
$$(a = 0 \text{ for } -90^\circ < p + \gamma < 90^\circ).$$

Thus the lunar shape is represented by a semicircle of radius R_0 and a 4-order curve, $r = R_0 = a\cos^4(p + \gamma)$. The mass center of the Moon coincides with the circle center; p is position angle of a point at the lunar edge; γ is the angle between the projection of the polar axis and the symmetry axis of the proposed model. The coordinate system is used which has the origin in the center of this circle, X-axis oriented northwards, and Y-axis oriented eastwards; using this system, the radius of the most probable circle and coordinates of its center, as

Card 1/2

39314

S/035/62/000/007/014/083
A001/A101

3,2500

AUTHOR: Gorynya, A. A.

TITLE: Determination of physical libration constants from Hartwig's obser-
vations from 1890 to 1922 with allowance for libration effect in
Moon's radius

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 19,
abstract 7A141 ("Izv. astron. observ. AN USSR", 1960, v. 3, no. 1,
23 - 35)

TEXT: In studying physical libration of the Moon, A. A. Yakovkin dis-
covered a new phenomenon which was named by him libration effect in Moon's radius.
This phenomenon consists in the following: The radius and even the shape of the
outer limb of the Moon depend on the magnitude of optical libration in latitude.
Various authors assume different figures for the shape of the Moon outer limb,
namely: a) Circle whose radius depends on optical libration; b) semi-circle
for the northern hemisphere and semi-ellipse with a variable major semi-axis,
directed along the central meridian, for the southern hemisphere; c) the same

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Determination of...

S/035/62/000/007/014/083
A001/A101

for the northern hemisphere and semi-ellipse with a major semi-axis turned towards decreasing position angles by about 15 - 30°. The author reprocesses observations of the lunar crater Moesting A, carried out by Hartwig in Bamberg in 1890 - 1922. These observations were processed by Naumann on several assumptions as to the shape of the Moon outer limb, and every time in two variants; with and without corrections for relief, according to Hayn's maps, taken into account. Corrections of physical libration elements are calculated for each of these variants. There are 11 references.

S. Makover

[Abstracter's note: Complete translation]

Card 2/2

87238

3.1550 (1057,1062,1129)

S/034/60/000/211/001/001
E133/E161

AUTHOR: Gorynya, A.A.

TITLE: A Revision of Hartvig's Lunar Observations (1890-1915)
             Taking into Account the Libration Effect

PERIODICAL: Astronomicheskiy tsirkulyar, 1960, No.211, pp.14-16

TEXT: The observations made by Hartvig at Hamburg, to
determine the libration constants, were reduced by Naumann (Ref.1),
using the classical method. (This method assumes that, for
varying librations, the limit of the moon does not change, i.e. the
moon is a sphere of constant radius, the centre of this sphere
coinciding with the centre of mass). Later work (Refs 2 and 3) is
not thus restricted. The author therefore reconsiders the work, as
in Refs 2 and 3, in order to obtain new values for the inclination
of the lunar equator and for f (a function of the moments of
inertia). He used two approximations: 1) a semi-circle for the
Northern limb and a curve $r = r_0 + a \cos^4 \rho$ for the Southern
limb, and 2) the same system but now inclined at an angle of 20°
to the N—S line. This second approximation was used because
Spencer Jones (Ref.4) has shown that there is a systematic
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87238
S/034/60/000/211/001/001
E133/E161

A Revision of Hartvig's Lunar Observations (1890-1915) Taking Into
Account the Libration Effect

elevation of the limb in the S.E. quadrant.   To obtain a value for
the constant a (which depends on the libration in latitude, β_0),
the author uses data given by Spencer Jones.   He finds:

$$a = 1".44 + 0".089 \ \beta_0$$

Two values for a are obtained for the case   2)   above; one
for the East, and one for the West, limb.   The results are given
in the following table, where the first column corresponds to
case   1)   and the second column to case   2).

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S/034/60/000/211/001/001
E133/E161

A Revision of Hartvig's Lunar Observations (1890-1915) Taking Into
Account the Libration Effect

h	15' 32".0 ±0".73	15' 34".1 ±0".52
λ	-5°11'10" ±18"	-5°11'32" ±13"
β	-3°12'56" ±13"	-3°12'43" ±10"
I	1°32'36" ± 22"	1°32'40" ±15"
f	0.82±0.041	0.82±0.029

The average errors indicate that 2) is more realistic. The
author also gives, for comparison, Naumann's results. He concludes
that the inclination should be increased by 1'20" and f by 0.12.
There are 2 tables and 4 references: 2 Soviet and 2 non-Soviet.

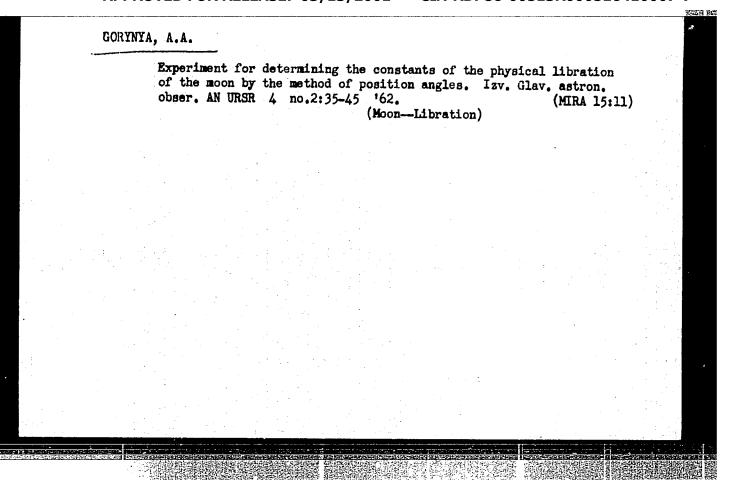ASSOCIATION: Goloseyevo, GAO AN USSR
Card 3/3   (GAO, AS Ukr.SSR, Goloseyevo)
SUBMITTED: March 28, 1960

GORYNYA, Anton Ageyevich;DROFA,Vasiliy Kirillovich; YAKOVKIN, A.A.,
        otv. red.; LABINOVA, N.M., red.izd-va; RAKHLINA, N.P.,
        tekhn. red.

        [Relief of the boundary area of the moon; based on photographic
        observations on the astrograph of the Astronomical Observatory
        of Kiev University] Rel'ef kraevoi zony Luny; po fotograficheskim
        nabliudeniiam na astrografe astrono icheskoi observatorii Kiev-
        skogo gosudarstvennogo universiteta im. T.G.Shevchenko. Kiev,
        Izd-vo Akad. nauk USSR, 1962. 162 p.   (MIRA 15:5)
                                (Moon—Surface)

GORYNYA, A.A.

Experiment for determining the constants of the physical libration of the moon by the method of position angles. Izv. Glav. astron. obser. AN URSR 4 no.2:35-45 '62.   (MIRA 15:11)
                                   (Moon—Libration)

L 40818-65   EWT(l)/EWG(v)/EEC(t)   Po-4/Pe-5/Pq-4/Pac-4/Pae-2   GS/GW

ACCESSION NR: AT5009189   UR/0000/63/000/000/0410/0412

AUTHOR: Gorynya, A. A.

TITLE: Determination of the constants of lunar physical libration from observations of position angles

SOURCE: Astrometricheskaya konferentsiya SSSR. 15th. Pulkovo, 1960. Trudy. Moscow, Izd-vo AN SSSR, 1963, 410-412

TOPIC TAGS: moon, astrometry, lunar physical libration

ABSTRACT: Analyses of long series of observations of the moon made in many observa- ... different instruments for the determination of physical libration have always ... assumption concerning the figure ... ... of the moon. ... values of the parameters of lunar physical libration have been obtained, de- pending on the lunar model used. The differences in the inclination i of the lunar equator to the ecliptic and the function f of the moments of inertia have been particularly large. ... has proposed a method for determining i and f by measurement of the ... directions on the lunar surface ... relatively small ... situated near the lunar limb. This article reports on a test of this method. The

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L 40818-65
ACCESSION NR: AT5009189

O

negatives used were obtained on a refractor (D = 200 mm, F = 4 3 m) at the Astronomi-
... observatoriya Kiyevskogo universiteta (Astronomical Observatory of Kiev

... The rectangular coordinates of stars and craters were meas-
... computation of the position angles of stars and the directions between Moesting

... of the position angles between Moesting A and ... crater in an equator-
... 3, correction of these angles for differential refraction 4 computation of

... These were then

$$\left(\frac{d\pi}{dt}\right)dt + \left(\frac{d\pi}{dt}\right)dt = \tau_{obs} - \tau_{com} \tag{1}$$

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ACCESSION NR: AT5009189

Such equations were written for all directions Moesting A limb crater. It is assumed
that reliable results will be [illegible]

$$\Delta I = +0.87 \pm 0.32, \quad P = 126.16,$$
$$\Delta f = +0.11 \pm 0.11, \quad P = 1066.87. \tag{2}$$

The mean error of one equation with the weight $P = 1$ was

$$\varepsilon_1 = \pm 3.5. \tag{3}$$

After corrections the final values of I and f were:

$$I = 1°33'12'' \pm 10'' \text{ (mean error)} \tag{4}$$
$$f = 0.84 \pm 0.11 \quad \text{(mean error)}$$

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L 40318-65
ACCESSION NR: AT5009189   0

The value of f was found to be somewhat greater than that indicated by heliometric obser-
vations. The value of I is also somewhat greater. This method makes it possible to
determine the values of lunar physical libration independently of the influence of the figure
of the limb zone of the moon. Orig. art. has: 6 formulas.

ASSOCIATION: none

SUBMITTED: 6Apr63   ENCL: 00   SUB CODE: AA

NO REF SOV: 001   OTHER: 000

Card   1/4

FEDOROV, Ye.P., otv. red.; LUKATSKAYA, F.I., red.; GORYNYA, A.A.,
red.; KOLCHINSKIY, I.G., red.; BEREZINETS, L.P., red.

[Studies in the physics of stars and diffusion matter] Is-
sledovaniia po fizike zvezd i diffuznoi materii. Kiev,
Naukova dumka, 1964. 74 p.   (MIRA 17:11)

1. Akademiya nauk URSR, Kiev. Holovna astronomichna obser-
vatoriya.

FEDOROV, Ye.P., otv. red.; GORYNYA, A.A., red.; KOLCHINSKIY, I.G., red.; LUKATSKAYA, F.I., red.; BEREZINETS, L.P., red.

[Problems in astrometry] Voprosy astrometrii. Kiev, "Naukova dumka," 1964. 94 p.   (MIRA 17:5)

1. Akademiya nauk URSR, Kiev. Holovna astronomichna observatoriya.

KOVAL', I.K., otv. red.; FEDOROV, Yu.P., red.; GORYNYA, A.A., red.;
        KOLCHINSKIY, I.G., red.; LUKATSKAYA, F.I., red.;
        BEREZINETS, L.P., red.

        [Physics of the moon and planets] Fizika Luny i planet.
        Kiev, Naukova dumka, 1964. 137 p.   (MIRA 17:10)

        1. Akademiya nauk URSR, Kiev. Holovna astronomichna ob-
        servatoriya.

ACCESSION NR: AT4043449   S/0000/64/000/000/0022/0030

AUTHOR: Gory*nya, A. A.

TITLE: Derivation of the constants of lunar physical libration

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Voprony* astrometrii (Probl ms in astrometry). Kiev, Izd-vo Naukova dumka, 1964, 22-30

TOPIC TAGS: moon, lunar libration, libration constant, physical libration

ABSTRACT: The problem of determining the constants of the physical libration of the moon has been studied by many authors, but almost all are based on measurements relating Moesting A to points on the limb of the lunar disk. This gives rise to large systematic errors in the principal parameters of physical libration. This inadequacy is not present in the determination of the parameters of lunar physical libration based on measurements of the position angles of selected craters. The present paper makes use of new results obtained by this method. As in an earlier study by the author (Izv. GAO AN UkrSSR, Izd-vo AN UkrSSR, Vol. IV, No. 2, 1962), the initial data used were lunar photographs taken at the Astronomicheskaya observatoriya kiyevskogo universiteta (Astronomical Observatory of Kiev University), and in part at the GAO AN USSR in 1950-1959. This article gives the results of

Card 1/3

ACCESSION NR: AT4043449

a study of 43 plates. The list of craters used is given in Table 1 of the original; seleno-graphic coordinates from two catalogues are given. Table 2 of the original lists the 43 plates, with date and time of observation, the numbering of the craters and topocentric coordinates of the moon. Table 3 of the original gives the values of the computed coordinates of the craters in an oblique projection; these coordinates are expressed in fractions of the earth's equator. These coordinates can be used to compute the theoretical position angles of the directions Moesting A - limb crater in an ecliptic coordinate system. Details are given on the method for determining the observed position angles. The series of observations reported in the earlier paper and the present study are compared; Table 6 of the original compares the results of the 2 series and gives an analysis of the combined series. The following values were determined: $\Delta I = +0'.99 \pm 0'.26$ (mean square error) and Δf = + 0.16 ± 0.13 (mean square error). At the present time the author's observatory is making visual lunar observations involving measurement of position angles with an ordinary hair micrometer. Such observations have certain advantages over photographic observations. Photographic observations, however, still will be analyzed also. Orig. art. has: 11 formulas and 6 tables.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN UkrSSR (Main Astronomical Observatory, AN UkrSSR)

Card 2/3

ACCESSION NR: AT4043449

SUBMITTED: 11Mar64   ENCL: 00

SUB CODE: AA   NO REF SOV: 002   OTHER: 000

Card 3/3

FEDOROV, Ye.P., otv. red.; GORYNYA, A.A., red.; KOLCHINSKIY, I.G.,
red.; LUKATSKAYA, F.I., red.; BEREZINETS, L.P., red.

[Spectrophotometric studies of active formations on the
sun] Spektrofotometricheskie issledovaniia aktivnykh ob-
razovanii na Solntse. Kiev, Naukova dumka, 1964. 104 p.
                                    (MIRA 17:12)

1. Akademiya nauk URSR, Kiev. Holovna astronomichna obser-
vatoriya.

YAKOVKIN, A.A., otv. red.; FEDOROV, Ye.P., red.; AKSENT'YEVA,
    Z.N., red.; BARABASHOV, N.P., red.; BOGORODSKIY, A.F.,
    red.; GORYNYA, A.A., red.; KOVAL', I.K., red.;
    KOLCHINSKIY, I.G., red.; TSESEVICH, V.P., red.;
    KOVALENKO, L.D., red.

[Figure and motion of the moon] Figura i dvizhenie Luny.
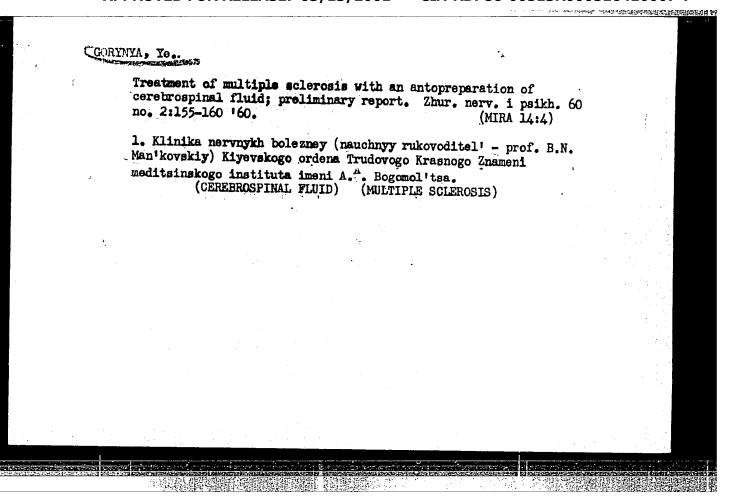Kiev, Naukova dumka, 1965. 135 p.   (MIRA 18:7)
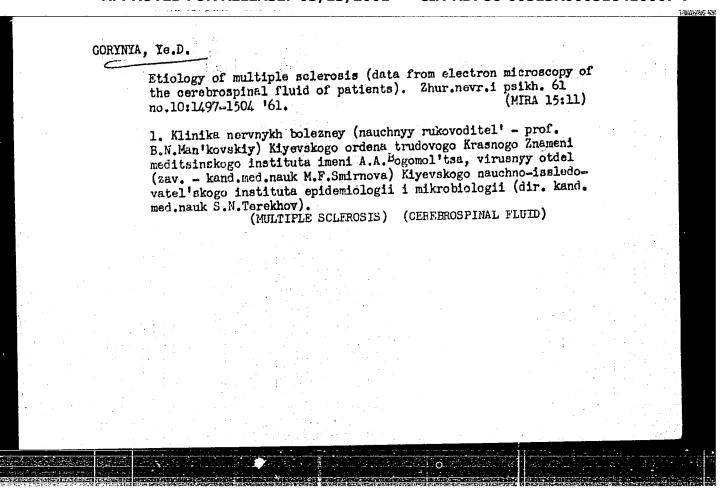
1. Akademiya nauk URSR, Kiev.

L 3419-66   EWT(1)   GW/GS

ACCESSION NR: AT5023740   UR/0000/65/000/000/0009/0026   /3
                                                                                //
AUTHOR: Gorynya, A. A.   &+/

TITLE: Determination of constants of physical lunar libration by the method of
position angles obtained from visual observations

SOURCE: AN UkrSSR. Figura i dvizheniye Luny (Shape and motion of the Moon),
Kiev, Naukova dumka, 1965, 9-26

TOPIC TAGS: lunar motion, lunar crater, selenography

ABSTRACT: The paper makes use of 50 observations made with a refractor from 13
September, 1962, to 12 August, 1963, and containing 276 Moesting A-limb crater
directions, from which the theoretical position angles of these directions in the
ecliptic coordinate system are calculated. The following standard equations are
derived:

$$152.48 \, dI + 21.63 \, df = 127.19$$
$$21.63 \, dI + 734.40 \, df = 11.64.$$

where I is the inclination of the moon's equator to the ecliptic and f is the
function of the moon's moments of inertia. Solution of these equations yields
corrections to I_0 and f_0:

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L 3419-66

2

ACCESSION NR: AT5023740

$$\Delta I = + 50" \pm 11",$$
$$\Delta f = -0.01 \pm 0.08$$

The final quantities sought are:

$$I = 1°33'10" \pm 11"$$
$$f = 0.84 \pm 0.08$$

"I express my appreciation to N. P. Pilipyuk for carrying out the major part of the computation work." Orig. art. has: 5 tables.

ASSOCIATION: None

SUBMITTED: 12May65   ENCL: 00   SUB CODE: AA

NO REF SOV: 006   OTHER: 001

Card 2/2

L 3420-66   EWT(1)   GS/GW
ACCESSION NR: AT5023741   UR/0000/65/000/000/0027/0031   //

                                                                                                  B+/
AUTHOR: Gorynya, A. A.

TITLE: Determination of constants of physical libration of the moon

SOURCE: AN UkrSSR. Figura i dvizheniye Luny (Shape and motion of the Moon).
Kiev, Naukova dumka, 1965, 27-31

TOPIC TAGS: lunar motion, lunar crater, selenography

ABSTRACT: The article continues the study of constants of physical libration of
the moon based on observation of position angles. The determination of the in-
clination of the moon's equator to the ecliptic (I) and function of the moon's
moments of inertia (F) constitutes the chief problem in the calculation of the
moon's rotation. The following standard equations are derived:
$$75.48\ dl + 9.84\ df = 20.06,$$
$$9.84\ dl + 183.77\ df = 44.69$$

Their solutions are
$$\Delta\ I = +0'.24 +0'.28,$$
$$\Delta\ f = + 0.23 \mp 0.18.$$

Considering the initial values I_0 and f_0, the authors finally obtain
Card 1/2

L 3420-66
ACCESSION NR: AT5023741   O

$$I = 1^\circ 32' 34'' \pm 17'',$$
$$f = 0.83 \pm 0.18.$$

Some qualifications placed upon these values are listed. Orig. art. has:
2 tables.

ASSOCIATION: None

SUBMITTED: 12May65   ENCL: 00   SUB CODE: AA

NO REF SOV: 006   OTHER: 000

Card 2/2

GORYNYA, Ye..

Treatment of multiple sclerosis with an antopreparation of
cerebrospinal fluid; preliminary report. Zhur. nerv. i psikh. 60
no. 2:155-160 '60.   (MIRA 14:4)

1. Klinika nervnykh bolezney (nauchnyy rukovoditel' - prof. B.N.
Man'kovskiy) Kiyevskogo ordena Trudovogo Krasnogo Znameni
meditsinskogo instituta imeni A.A. Bogomol'tsa.
          (CEREBROSPINAL FLUID)   (MULTIPLE SCLEROSIS)

GORYNIA, Ye.D.

Etiology of multiple sclerosis (data from electron microscopy of the cerebrospinal fluid of patients). Zhur.nevr.i psikh. 61 no.10:1497-1504 '61.   (MIRA 15:11)

1. Klinika nervnykh bolezney (nauchnyy rukovoditel' - prof. B.N.Man'kovskiy) Kiyevskogo ordena trudovogo Krasnogo Znameni meditsinskogo instituta imeni A.A.Bogomol'tsa, virusnyy otdel (zav. - kand.med.nauk M.F.Smirnova) Kiyevskogo nauchno-issledo-vatel'skogo instituta epidemiologii i mikrobiologii (dir. kand. med.nauk S.N.Terekhov).
        (MULTIPLE SCLEROSIS)   (CEREBROSPINAL FLUID)

GORYNSKI, Aleksander

Studies on the water management of Perilla ocymoides L. Prace
nauk roln i lesn 11 no.3:19-43 '62.

GORYNSKI, T.

Results of wedge resection of the spine and the Gruca technic of
alloplasty in scoliosis. Acta chir. orthop. traum. eech. 29 no.5:
434-439 0 '62.

1. Ortopedicka klinika lekarske akademie ve Varsave, prednosta prof.
dr. A. Gruca.
          (SCOLIOSIS)   (BONE TRANSPLANTATION)

45767

S/194/62/000/012/070/101
D295/D308

9,1000

AUTHOR: Goryschkin, V. I.

TITLE: Method of measurement of ultra-short wave field
             strength and of the radiation power of an aerial

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
             no. 12, 1962, 24, abstract 12 Zh 142 (Kratkiye soob-
             shch. Buryatsk. kompleksn. n.-i. in-ta, no. 3, 1962,
             146-151)

TEXT: The suggested field strength measurement method reduces to
measurement of the output voltage or strength of a reception an-
tenna by replacing the emf induced in the antenna by an external
emf from a calibrated generator. If the antenna is exactly matched
with the receiver, the field strength is given by the expression

$$E = (4\pi/\lambda)e^{\beta l} (30/\varepsilon_{rec}R_g)^{1/2}U_g$$

Card 1/3

Method of measurement ...

where ß is the attenuation constant of the feeder, l is the length
of the feeder, ε_{rec} is the gain of the receiving antenna, R_g is the
internal resistance of the generator and U_g is the output voltage
of the generator. The accuracy of such a measurement method is not
less than 20%. The emission power of an antenna for unknown trans-
mitter power and unknown parameters of the antenna-feeder system
can be measured by means of a standard receiving antenna and a
sensitive power meter. The expression for the radiation power of an
omnidirectional antenna equivalent to the above one has the form

$$P_\Sigma = 158 \ L^2 P_m / \lambda^2 \ \varepsilon'_{sa} \eta_f$$

where L is the distance between transmitting and receiving anten-
nas, P_m is the power at the meter input, η_f is the feeder efficien-
cy, and ε'_{sa} is the gain of the standard antenna with respect to a

Card 2/3

Method of measurement ...   S/194/62/000/012/070/101
                                             D295/D308

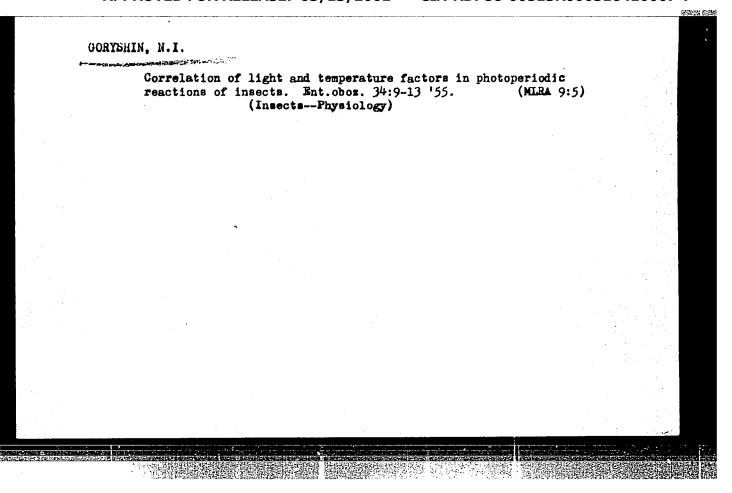half-wave dipole. The accuracy of the method is not less than 15%.
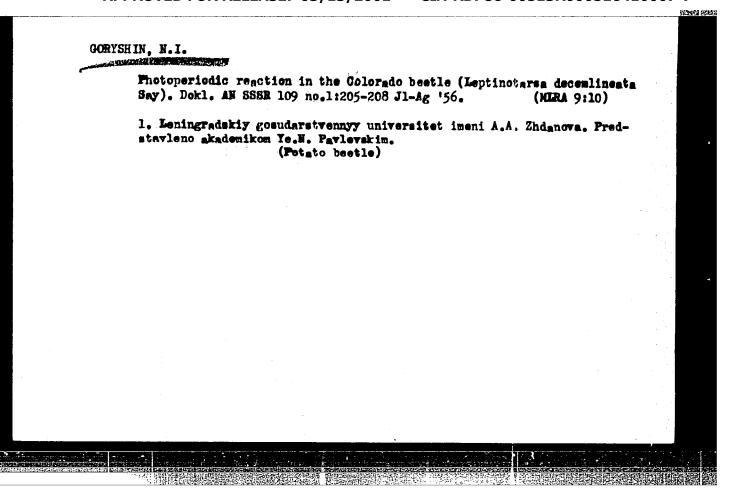/ Abstracter's note: Complete translation. 7

Card 3/3

GORYSHIN, N. I.

"Ecological Analysis of the Seasonal Cycle of the Development of the Cotton
Borer in the Cotton Cultivating Northern Rayons." Cand Biol Sci, Leningrad
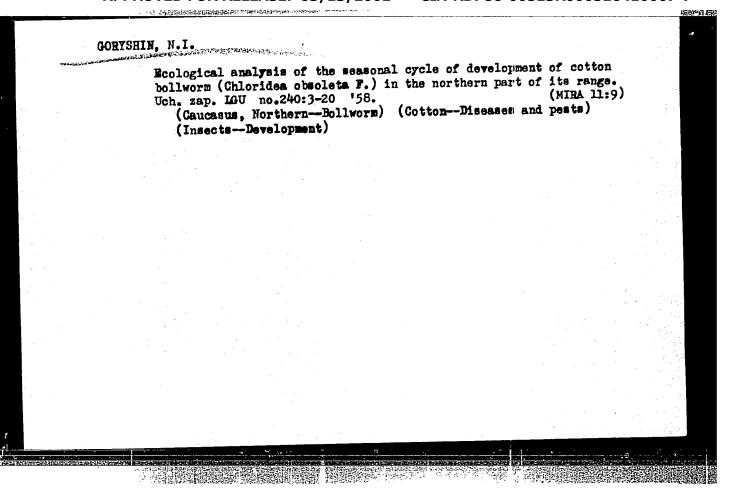State U, Leningrad, 1953. (RZhBiol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educationa Institutions (13) SO: Sum. 598, 29 Jul 55

GORYSHIN, N.I.

Correlation of light and temperature factors in photoperiodic
reactions of insects. Ent.oboz. 34:9-13 '55.   (MLRA 9:5)
            (Insects—Physiology)

GORYSHIN, N.I.

Photoperiodic reaction in the Colorado beetle (Leptinotarsa decemlineata Say). Dokl. AN SSSR 109 no.1:205-208 Jl-Ag '56.   (MIRA 9:10)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova. Pred-stavleno akademikom Ye.N. Pavlovskim.
                    (Potato beetle)

GORYSHIN, M. I.   (Leningrad)

"On the correlation of the light- and temperature factor in the delelopment
of insect types".

Theoretical and Practical Work Carried out by Entomologists.
reported at All-Union Entomological Conference, Georgian Dept. A-U
Entomological Society, Tbilisi, 4-9 Oct 1957
Vestnik AN SSSR, 1958, v. 28, No. 1, p. 129-30 (author Gilyarov, M. S.)

GORYSHIN, N.I.

Ecological analysis of the seasonal cycle of development of cotton
bollworm (Chloridea obsoleta F.) in the northern part of its range.
Uch. zap. LGU no.240:3-20 '58.   (MIRA 11:9)
    (Caucasus, Northern--Bollworm) (Cotton--Diseases and pests)
    (Insects--Development)

USSR / General and Specialized Zoology - Insects.   P

Abs Jour   : Ref Zhur - Biologiya, No 5, 1959, No. 20810

Author   : Goryshin, N. I.
Inst   : AS USSR
Title   : Influence of the Length of Day on the
              Formation of the Diapause in the Colorado
              Beetle (Leptinotarsa Decemlineata Say)

Orig Pub   : V sb.: Koloradsk. zhuk i mery bor'by s
              nim. 2.M., AN SSSR, 1958, 136-149

Abstract   : The Colorado beetles of the I larval age were
              raised in photothermostats at 25° and for
              different photoperiods (0; 12; 13; 14; 15;
              16; 17; 18 and 24 hours of daylight). The
              feed were the leaves of the potato of the
              Akkersegen variety. Under all conditions
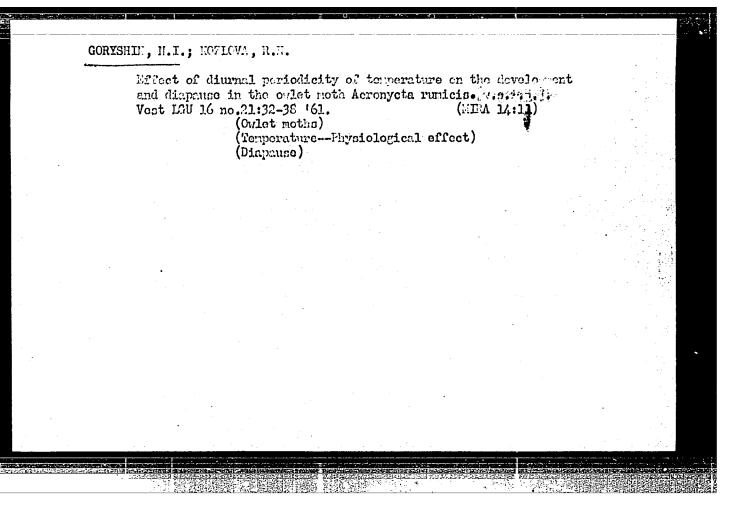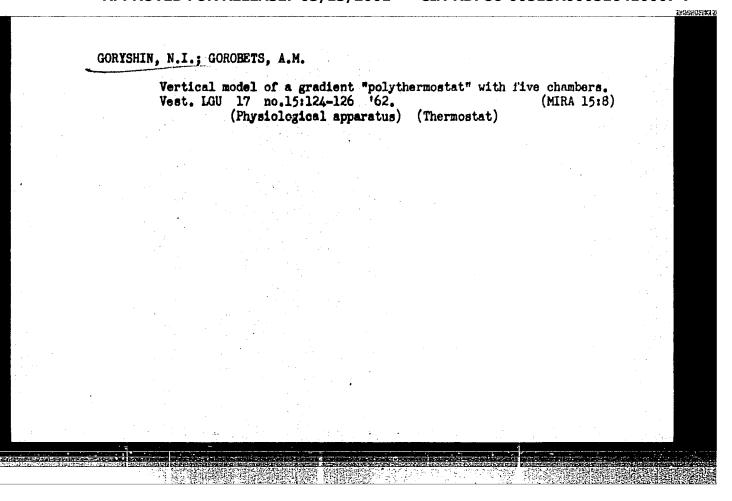   9-12 days after revival the larvae stopped

Card 1/3

10

USSR / General and Specialized Zoology - Insects.   P

Abs Jour   : Ref Zhur - Biologiya, No 5, 1959, No. 20810

feeding and went into the pupa stage. The
young beetles appeared, on the average, 22
days after the start of the experiment, and
the average period of development varied
from 23.9 to 25.9 days, also without any
relationship to the length of the day. With
a day less than 16 hours long, 95% of the
beetles went into hibernation on the 10th
day after the pupa stage with a strong develop-
ment of the adipose body and with inactive
gonads. With longer days, the diapause
occurred for 10-15%, and the rest of the
beetles continued to multiply until November
inclusive. With a long day, the autumn
productivity of the beetles was a good deal
larger than the productivity of the spring

Card 2/3

USSR / General and Specialized Zoology - Insects.   P

GORYSHIN, N.I.; KOZLOVA, R.N.

Effect of diurnal periodicity of temperature on the development
and diapause in the owlet moth Acronycta rumicis.
Vest LGU 16 no.21:32-38 '61.   (MIRA 14:11)
        (Owlet moths)
        (Temperature—Physiological effect)
        (Diapause)

GORYSHIN, N.I.; GOROBETS, A.M.

> Vertical model of a gradient "polythermostat" with five chambers.
> Vest. LGU 17 no.15:124-126 '62.   (MIRA 15:8)
> > (Physiological apparatus) (Thermostat)

GORYSHIN, N. I.; TSVETAYEVA, G. F.

Effect of intermittent lighting on the photoperiodic reaction
and behavior of the moth Acronycta rumicis L. Trudy PBI
no.19:122-135 '62.   (MIRA 16:1)

1. Laboratoriya entomologii Petergofskogo biologicheskogo
instituta.

         (Photoperiodism)   (Owlet moths)

GORYSHIN, N.I.

Effect of light-dark cycles of different duration on the photoperiodic
reaction of insects. Ent. oboz. 42 no.1:22-2& '63. (MIRA 16:8)

1. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta,
Leningrad.
(Photoperiodism) (Insects—Development)

GORYSHIN, N.I.

Effect of diurnal rhythms of light and temperature on the formation of diapause in lepidopterons (Lepidoptera). Ent. oboz. 43 no.1:86-93 '64   (MIRA 17:6)

1. Biologicheskiy institut Leningradskogo gosudar.tvennogo universiteta St. Petergof.

ACC NR: AP7001560   SOURCE CODE: UR/0020/66/171/003/0754/0757

AUTHORS: Goryshin, N. I.; Tyshchenko, G. F.

ORG: none

TITLE: The significance of the correlation and absolute duration of day and night for photoperiodic reactivity of insects

SOURCE: AN SSSR. Doklady, v. 171, no. 3, 1966, 754-757

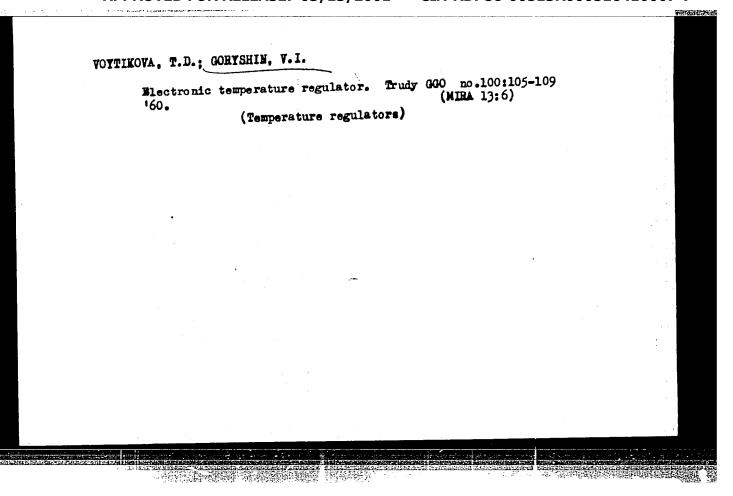TOPIC TAGS: animal physiology, light biologic effect, insect, ENTOMOLOGY

ABSTRACT: Experiments were performed to study the photoperiodic effectiveness of various light-dark cycles and the variation in the critical photoperiod. Two types of Acronyata rumicis L. were studied for photoperiodic reactivity to light-dark cycles from 14 to 35 hours at 20°. The critical dark period (with 50% of the insects in diapause) for the Belgorod and Sukhumi types were 7 hours and 8 hours 25 minutes, respectively, ± 20 minutes, while 16 hours was the minimum cycle duration at which reactivity results from the interaction of light and dark of definite duration rather than from a correlation between light and dark. Test data deny the existence of a special adaptability of the photoperiodic reactivity mechanism to circadian rhythms and support the theory of C. Pittendrigh, S. D. Beck, and V. P. Tyshchenko on the mechanism of photoperiodic regulation. This paper was presented by Academician B. Ye. Bykhovskiy on 11 April 1966. Orig. art. has: 3 graphs.

SUB CODE: 06/ SUBM DATE: 26Mar66/ ORIG REF: 006/ OTH REF: 008
Card 1/1

GORYSHIN, Pavel Ivanovich; RODIGIN, Andrey Andreyevich; SARKISOV,
    Vladimi Vladimirovich; ZOLOTOGOROV, Vladimir Grigor'yevich
    MEDVEDEV, N.A., red.

    [Economic basis of new lumbering equipment] Ekonomicheskoe
    obosnovanie novoi lesozagotovitel'noi tekhniki. Moskva,
    Lesnaia promyshlennost', 1965. 109 p.   (MIRA 18:9)

GORYSHIN, V.I.

Apparatus for measuring and recording atmospheric transparency.
Trudy GGO no.100:74-85 '60.   (MIRA 13:6)
(Atmospheric transparency) (Meteorological instruments)

VOYTIKOVA, T.D.; GORYSHIN, V.I.

Electronic temperature regulator. Trudy GGO no.100:105-109
'60.   (MIRA 13:6)
            (Temperature regulators)

31257
S/531/61/000/118/002/004
D218/D302

3,5150

AUTHOR: Goryshin, V. I.

TITLE: A compensated photometer for accurate measurements
              and recordings of the transparency of the atmosphere

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya.
              Trudy. No. 118, 1961. Issledovaniya radiatsionnykh
              protsessov, 26-41

TEXT: The first part of the present paper is concerned with the
review of existing compensated photometers for measuring and re-
cording the transparency of the atmosphere and analyzing the asso-
ciated experimental errors. The second part of the papers gives a
description of a compensated photometer developed by the present
author. The photometer is illustrated in Fig. 2. The source of
light is in the form of a low voltage filament lamp ЛН (LN) (2 x 2
mm spiral). Light from this lamp is focussed in the plane of the
modulating disc M by the achromatic condenser $Л_1$, $Л_2$. The lenses
$Л_3$, $Л_4$ and prism $Пp_1$ convert the light beam into a slightly di-
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A compensated photometer ...
D218/D302

verging one and direct it on to a set of reflecting prisms. The re-
flected light is intercepted by the mirror 3 which focusses it on-
to the cathode of the photocell $\phi 3$. The second part of the system
produces the comparison beam which is focussed on the modulating
disc by the lenses Jl_5, Jl_6. It is then collimated by Jl_7 and ΠP_3,
and reaches the diaphragm Π_1 in the form of a parallel beam. The
lens Jl_8 refocusses the light in the plane of the glass diffuser MC.
The wedges YK which are made of neutral glass, are used to control
the intensity. Finally, the lens Jl_9 throws the light onto the ca-
thode of the photocell $\phi 3$. The modulating disc is in the form of
a toothed wheel which is so arranged that when the two beams are
equal in intensity the photocell produces a series of square pulses
of equal amplitude, while when the two beams are not equal in in-
tensity, the photocell produces alternate sets of pulses which are
such that the amplitude within each set is the same but differs
from set to set. It follows that when the two beams are not equal

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S/531/61/000/118/002/004
D218/D302

A compensated photometer ...

in intensity the signal is amplitude-modulated at a frequency which
is much smaller than the carrier frequency. Typical values are
1800 c/s for the carrier frequency and 50 c/s for the low-frequency
component. A special electronic circuit was developed to analyze
the output signal of the photocell. It consists of a two-stage nar-
row-band amplifier tuned to the carrier frequency. This is followed
by a detector, a carrier frequency filter, and a three-stage nar-
row-band amplifier tuned to the modulation frequency. The output
of the instrument is such that the transparency of the atmosphere
can be measured to an accuracy of better than ± 1%. It is stated
that the instrument can be used to compare, for the first time, the
horizontal and vertical transparency of the atmosphere over distan-
ces up to 200 m, and to investigate atmospheric turbidity. The in-
strument has a low inertia and is capable of following the rapid
changes in the transparency which are associated with convective
processes. The method of modulation is claimed to be new. There are
5 figures and 12 references: 5 Soviet-bloc and 7 non-Soviet-bloc.
The reference to the English-language publication reads as follows:

Card 3/4₃

DASHKEVICH, L.L.; SURAZHSKIY, D.Ya.; USOL'TSEV, V.A.; AZBEL', M.Ye.;
    BOZHEVIKOV, S.N.; VORZHENEVSKIY, N.S.; MANUYLOV, K.N.;
    GLAZOVA, Ye.F.; KARPUSHA, V.Ye.; PROTOPOPOV, N.G.; SHADRINA,
    Ye.N.; IGRUNOV, V.D.; NECHAYEV, I.N.; BESPALOV, D.P.;
    ILLARIONOV, V.I.; GLEBOV, F.A.; GLAZOVA, Ye.F.; KAULIN, N.Ya.;
    GORYSHIN, V.I.; GAVRILOV, V.A.; TIMOFEYEV, M.P., retsenzent;
    YEFREMYCHEV, V.I., retsenzent; KRASOVSKIY, V.B., retsenzent;
    V'YUNNIK, A.P., retsenzent; STERNZAT, M.S., otv. red.;
    RUSIN, N.P., otv. red.; YASNOGORODSKAYA, M.M., red.; VOLKOV,
    N.V., tekhn. red.

[Instructions to hydrometeorological stations and posts] Nastavle-
nie gidrometeorologicheskim stantsiiam i postam. Leningrad,
Gidrometeoroizdat. No.3. Pt.3. [Meteorological instruments and
observation methods used on a hydrometeorological network] Me-
teorologicheskie pribory i metody nabliudenii, primeniaemye na
gidrometeorologicheskoi seti. 1962. 295 p.   (MIRA 15:5)
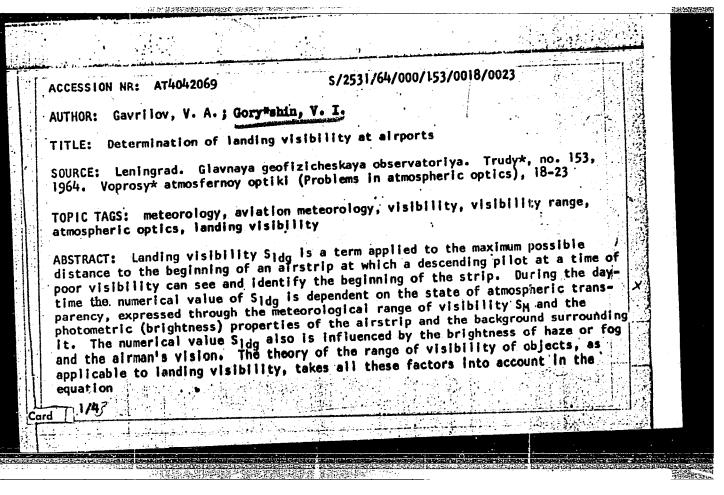
(Continued on next card)

DASHKEVICH, L.L.—— (continued) Card 2.

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeoro-
logicheskoy sluzhby. 2. Glavnaya geofizicheskaya observatoriya
Nauchno-issledovatel'skogo instituta gidrometeorologicheskikh
priborov i Gosudarstvennogo gidrologicheskogo instituta (for
Dashkevich, Surazhskiy, Usol'tsev, Azbel', Bozhevikov,
Vorzhenevskiy, Manuylov, Glazova, Karpusha, Protopopov, Shadrina,
Igrunov, Nechayev, Bespalov, Illarionov, Glebov, Glazova, Kaulin,
Gorysnin, Gavrilov). 3. Komissiya Glavnogo upravleniya gidrome-
teorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Nechayev,
Usol'tsev, Timofeyev, Yefremychev, Krasovskiy, V'yunnik)
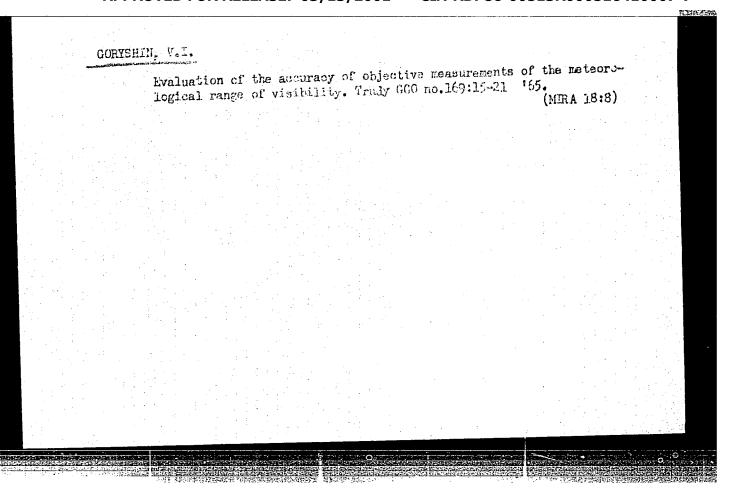   (Meteorology)

GORYSHIN, V. I.

"Objective photometers for automatic distance measurement and registration of atmospheric transparency."

report presented at the Atmospheric Radiation Symp, Leningrad, 5-12 Aug 64.

ACCESSION NR: AT4042069   S/2531/64/000/153/0018/0023

AUTHOR: Gavrilov, V. A.; Gory*shin, V. I.

TITLE: Determination of landing visibility at airports

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 153, 1964. Voprosy* atmosfernoy optiki (Problems in atmospheric optics), 18-23

TOPIC TAGS: meteorology, aviation meteorology, visibility, visibility range, atmospheric optics, landing visibility

ABSTRACT: Landing visibility S_{ldg} is a term applied to the maximum possible distance to the beginning of an airstrip at which a descending pilot at a time of poor visibility can see and identify the beginning of the strip. During the daytime the numerical value of S_{ldg} is dependent on the state of atmospheric transparency, expressed through the meteorological range of visibility S_M and the photometric (brightness) properties of the airstrip and the background surrounding it. The numerical value S_{ldg} also is influenced by the brightness of haze or fog and the airman's vision. The theory of the range of visibility of objects, as applicable to landing visibility, takes all these factors into account in the equation

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ACCESSION NR: AT4042069

$$S_{\text{вис}} = 0{,}66\, S_{\text{M}} \lg \frac{\frac{K_0}{\mathcal{E}} + \frac{5}{5_0} - 1}{\frac{5}{5_0}}. \qquad (1)$$

Here S_M is the meteorological range of visibility, $\frac{K_0}{\mathcal{E}}$ is the coefficient of visibility of the landing strip on a particular background (in the absence of haze) representing the ratio of the value K_0 of true contrast between the landing strip and the surrounding background to the value $\mathcal{E}$ -- the threshold of contrast sensitivity of the eye, $5/B_0$ is the ratio of the brightness of haze or fog in the layer of equal range of visibility to the brightness of the landing strip. However, landing visibility in fact is not determined by this method at Soviet airports; airmen are informed only of the meteorological range of visibility. This value (S_M) is determined by a transparency recorder. The authors discuss the means by which the other parameters in the formula are determined. S_{ldg} can be determined by use of a nomogram; preparation of the nomogram is described, a specific example is cited, and a sample nomogram is illustrated. It is shown how significantly S_{ldg} differs from S_M. In order to facilitate use of this concept of landing visibility the authors propose a special system of marking airstrips, as shown in Fig. 1 of the Enclosure. Discussion of the numerous advantages of such marking is followed by consideration of the determination of landing visi-

Card 2/4

ACCESSION NR: AT4042069

bility at nighttime; particular attention is given to the visual properties of
landing lights on the airstrip. Orig. art. has: 3 formulas and 2 figures.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observa-
tory)

SUBMITTED: 00   ENCL: 01

SUB CODE: ES   NO REF SOV: 002   OTHER: 000

Card 3/4

GORYSHIN, V.I.

Evaluation of the accuracy of objective measurements of the meteoro-
logical range of visibility. Trudy GGO no.169:15-21 '65.

(MIRA 18:8)

GORYSHIN, V. V. (Eng.): LEVIN, Z. D. (Eng.): LIKHACHEV, A. A. (Cand. Tech. Sci.):
     FELIKSON, Ye. I. (Cand. Tech. Sci.); GRIGOR'YEV, B. V. (Cand. Tech. Sci.); and
     SHNEYDER, Yu. G. (Cand. Tech. Sci.);

XIV. "Examples of Mechanization and Automation of Instrument-parts Manufacturing
    Processes," Automation and Mechanization of Production Processes in Instrument
    Manufacturing, Moscow, Mashgiz, 1958. 591 p.

PURPOSE: This book is intended for engineers, technicians, and scientific per-
sonnel concerned with mechanization and automation of production processes in
instrument manufacturing, and for students and teachers of this subject in vuzes.

GORYSHINA, L.V.

Studies on the Vi-antigen content of Escherichia coli and Salmonella
typhosa using diffuse precipitation on gel. Zhur.mikrobiol.epid. i
immun. 30 no.2:78-82 F '59.   (MIRA 12:3)

1. Iz Leningradskogo instituta vaktsin i syvorotok.
         (ESCHERICHIA COLI,
                Vi-antigen, determ. with diffuse precipitation on
             gel (Rus))
         (SALMONELLA TYPHOSA,
                same)

GORYSHINA, L.V.

Comparative study of the immunogenic properties of Escherichia coli and Salmonella containing Vi-antigen. Nauch. osn. proizv. bakt. prep.
10:51-56 '61. (MIRA 18:7)

1. Leningradskiy institut vaktsin i syvorotok.

GORYSHINA, L. V., Cand Med Sci -- (diss) "Comparative study of the im-
munological properties of Vi -- antigens of some representatives of bact-
eria of the intestinal-typhoid family. (Experimental research)." Lenin-
grad, 1960. 9 pp; (Leningrad State Order of Lenin Inst for Advanced
Training of Physicians im S. M. Kirov); 300 copies; price not given;
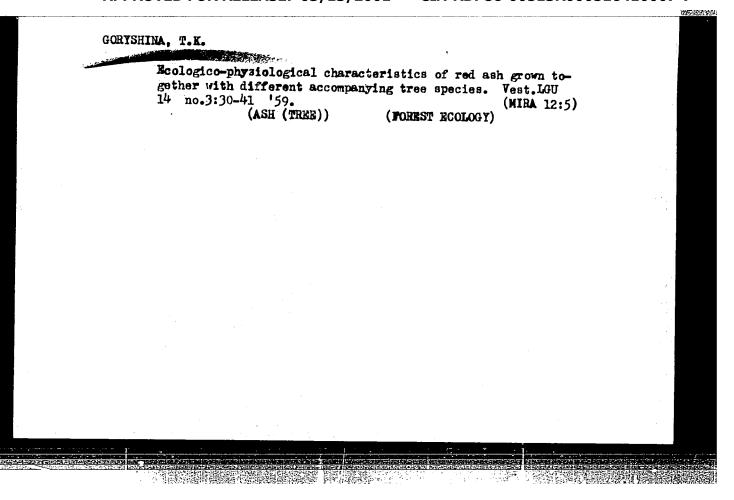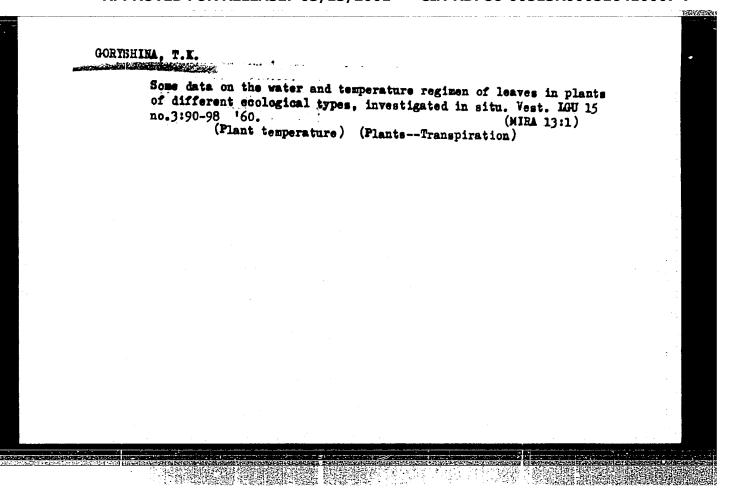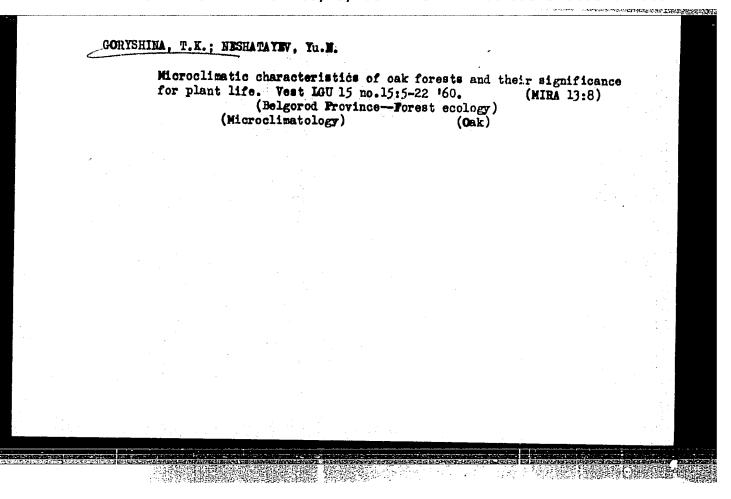(KL, 51-60, 120)

GORYSHINA, N.G.

Results of investigations on the temperature of plant leaves in
Leningrad Province. Trudy GGO no. 91:85-88 '60. (MIRA 14:1)
(Plant temperature)

GORYSHINA, N.G.

Methodology of determining reserves of productive moisture in a zone of excess moistening. Trudy GGO no.180:103-110 '65.

(MIRA 18:9)

GORYSHINA, T.K.

Data on the comparative ecology of young broad-leaved trees
in shelterbelts and in forests. Uch.zap.Len.un.no.107-136 '54.
(Forest ecology)   (MIRA 9:6)

GORYSHINA, T. K.,

"Ecological and Phytocenogenetic Study of Arboreous Species Acclimatized in the
Forest Steppe Zone;" (Dissertation for Degree of Candidate of Biological Sciences)
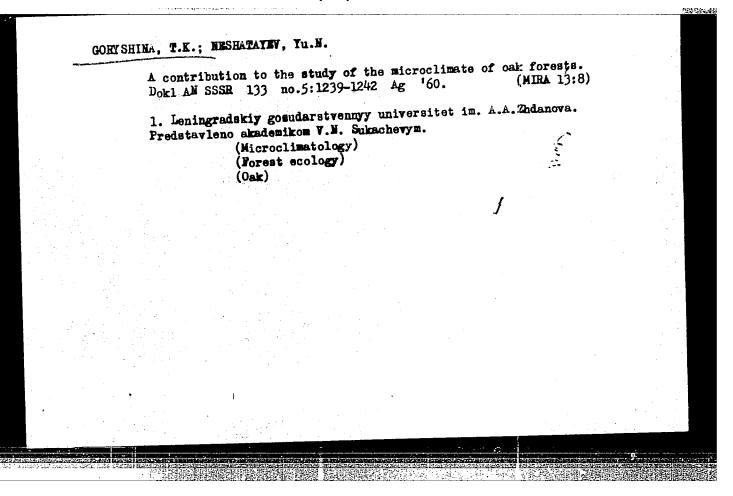Leningrad Order of Lenin State U imeni A.A. Zhdanov, Leningrad 1955
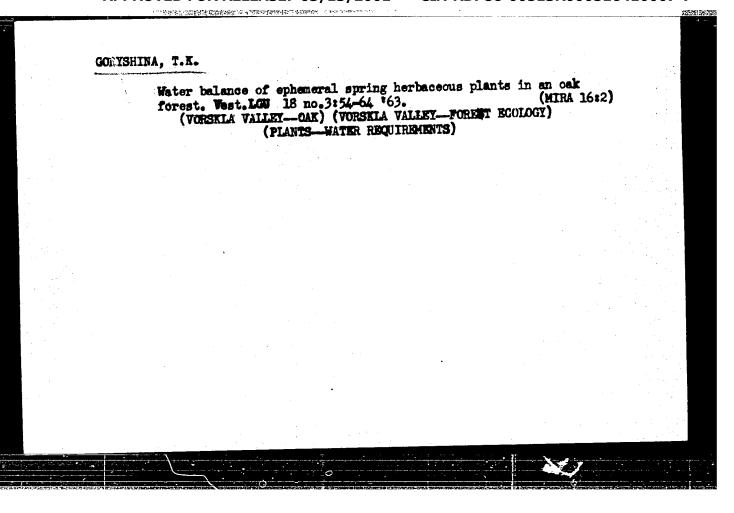
SO: M-1036 28 Mar 56

GORYSHINA, T.K.

The ecological and physiological properties of some acclimatized
species of trees in connection with their geographical origin.
Vest. Len. un. 11 no.21:18-30 '56.   (MLRA 10:2)

(Trees) (Acclimatization (Plants))
(Plants--Water requirements)

GORYSHINA, T.K.

Ecologico-physiological characteristics of red ash grown to-
gether with different accompanying tree species. Vest.LGU
14 no.3:30-41 '59.   (MIRA 12:5)
            (ASH (TREE))   (FOREST ECOLOGY)

GORYSHINA, T.K.

Some data on the water and temperature regimen of leaves in plants of different ecological types, investigated in situ. Vest. LGU 15 no.3:90-98 '60.   (MIRA 13:1)
          (Plant temperature) (Plants--Transpiration)

GORYSHINA, T.K.; NESHATAYEV, Yu.N.

Microclimatic characteristics of oak forests and their significance
for plant life. Vest LGU 15 no.15:5-22 '60.   (MIRA 13:8)
            (Belgorod Province--Forest ecology)
        (Microclimatology)   (Oak)

GORYSHINA, T.K.; NESHATAYEV, Yu.N.

A contribution to the study of the microclimate of oak forests.
Dokl AN SSSR 133 no.5:1239-1242 Ag '60.   (MIRA 13:8)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Predstavleno akademikom V.N. Sukachevym.
            (Microclimatology)
            (Forest ecology)
            (Oak)

GORYSHINA, T.K.

Temperature conditions of early-spring plants in oak forests. Bot. zhur. 46 no.9:1299-1303 S '61. (MIRA 14:9)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
   (Belgorod Province--Forest ecology) (Plant temperature)

GORYSHINA, T. K.

Some anatomicophysiological characteristics of spring and summer
leaves of Pulmonaria obscura Dumort. Nauch. dokl. vys. shkoly;
biol. nauki no.3:109-112 '62.   (MIRA 15:7)

1. Rekomendovana kafedroy geobotaniki Leningradskogo gosudarst-
vennogo universiteta im. A. A. Zhdanova.

                    (PULMONARIA)   (LEAVES)

GORYSHINA, T.K.
_____

    Water balance of ephemeral spring herbaceous plants in an oak
  forest. Vest.LGU 18 no.3:54-64 '63.   (MIRA 16:2)
    (VORSKLA VALLEY—OAK) (VORSKLA VALLEY—FOREST ECOLOGY)
        (PLANTS—WATER REQUIREMENTS)

GORYSHINA, T.K.

Experimental ecol⌐gic analysis of the seasonal rhythms of prevernal
ephemeroids in oak-dominated forests, Bot. zhur. 48 no.11:
1569-1582 N '63.   (MIRA 17:4)

1. Leningradskiy gosudarstvennyy universitet.

GORYSHINA, T.K., kand.biolog.nauk

Strange plant. Priroda 52 no.8:113 Ag '63.   (MIRA 16:9)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.
                              (Toothwort)

GORYSHINA, T.K.

Vegetative reproduction of the squill Scilla sibirica
Andrews. Nauch. dokl. vys. shkoly; biol. nauki no.3:
103-106 '64   (MIRA 17:8)

1. Rekomendovana laboratoriyey geobotaniki Biologicheskogo
nauchno-issledovatel'skogo instituta Leningradskogo gosu-
darstvennogo universiteta im. A.A. Zhdanova.

GORYSHINA, T.K.; SMIRNOVA, V. Ya.; TI CHAN-TSZIN' [T'i Ch'ang-chin]

Water balance of herbaceous summer plants in oak forests.
Vest. LGU 18 no.15:29-37'63.   (MIRA 16:9)
          (FOREST ECOLOGY) (PLANTS—WATER REQUIREMENTS)

GORYSHINA, T.K.

Subnivean formation of chlorophyll in prevernal plants
growing in oak-dominant woods. Bot. zhur. 49 no.4:
602-603 Ap'64.   (MIRA 17:5)

1. Leningradskiy gosudarstvennyy universitet.

GORYSHINA, T.K.

Regulation of the seasonal development rhythm of prevernal
nemoral ephemeroids under experimental conditions. Fiziol.
rast. 12 no.3:549-550 My-Je '65.   (MIRA 18:10)

1. Iaboratoriya eksperimental'noy geobotaniki Petergofskogo
Biologicheskogo instituta Leningradskogo universiteta.

GORYSHINA, T.K.

Nature of fall and winter dormancy in various seasonal groups
of grasses in oak forests. Biul.MOIP.Otd.biol. 70 no.5:46-52
S-O '65.

(MIRA 18:12)

GORYSHIN, N.I.; DONDUA, A.K.; BRAUN, Ye.A.

Device for temperature control of solutions during the development of autoradiograms. Nauch. dokl. vys. shkoly; biol. nauki no.1:78-83 '65.
(MIRA 18:2)

1. Rekomendovana kafedroy embriologii Leningradskogo gosudarst-vennogo universiteta.

GORYSHINA, T.K.

Anatomic structure of leaves of the early spring ephemerals in an oak forest. Vest. LGU 20 no.3:45-51 '65.

(MIRA 18:2)

GORYSHINA, V.G.; GAYLIS, Ye.Ya.

Using complexone IIIfor improving the specificity of the dithizone method for determining silver. Zav.lab.22 no.8:905-907 Ag '56.   (MLRA 9:11)
            (Compounds, Complex)
(Dithizone) (Silver--Analysis)

KHANINA, TS.G.; TREYGER, N.B.; GORYSHNIK, I.Sh.; BAKHSHINOVA, G.P.

Using liquid A-class bitumen in pavements. Avt.dor. 28
no.11:10-11 N '65.   (MIRA 18:11)

GORYSHNIK, L.L.; KRAVTSOV, Yu.A.

Second All-Union Interuniversity Conference on the Theory and
Methods for Calculating Nonlinear Electrical Circuits. Radio-
tekh. i elektron. 9 no.4:763-766 Ap '64.   (MIRA 17:7)

L 54002-65   EWT(i)/EWG(m)/EPR(n)-2/EPA(w)-2   Pz-6/Po-4/Pab-10/Pi-4   IJP(c)
                WW/AT
ACCESSION NR: AP5014101   UR/0203/65/005/003/0401/0412
                                                  550.388.2

AUTHORS: Goryshnik, L. L.; Dyukalov, A. N.

TITLE: Particle distribution in the vicinity of a charged sphere in weakly
ionized rarefied plasma

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 3, 1965, 401-412

TOPIC TAGS: plasma, rarefied gas, electron distribution, charged particle dis-
tribution, potential theory

ABSTRACT: The particle distribution around a charged sphere in a weakly ionized
plasma was determined analytically. Poisson's equation is written in the form

$$\frac{D^2}{a^2}\frac{1}{x^2}\frac{d}{dx}\left(x^2\frac{d z}{dx}\right)=n_e-n_i,$$

$$D=\sqrt{\frac{\Phi_0}{4\pi N_0 e^2}}=N(0)\sqrt{\frac{\Phi_0(0)}{N_0(cm^{-3})}},$$

and the solution of this equation is determined for the rarefied flow case or,

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$D/a \gg 1$. This in turn is divided into the three regions corresponding to weak or strong sphere potential

$$(3a)\, aD^{-1}\Phi_0 \ll kT, \quad (3\sigma)\, aD^{-1}\Phi_0 \sim kT, \quad (3s)\, aD^{-1}\Phi_0 \gg kT.$$

To define the integration domain, particle motion is analyzed in a centrally symmetric field with an effective potential energy

$$Y = \frac{M^2}{2mr^2} + S(r).$$

Three types of particle trajectories are identified; those intersecting the sphere surface, those coming from infinity and being reflected from the potential barrier back to infinity, and particles with periodic motion. The effective potential is defined in the form

$$y = Cx^{-2} + 1 - x \qquad \left(y = \frac{Y}{e\Phi_0}, \quad C = \frac{M^2}{2ma^2e\Phi_0} \right),$$

and together with the above trajectories various domains are identified for charged particle distributions on E versus C plots (E=y). On the basis of this analysis, the following expressions are obtained as electron and ion

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distributions

$$n_e(x) = \frac{1}{x^2} \iint_I \frac{f_{inf}\, dC\, dE}{\sqrt{E - Cx^{-2} - 1 + z}} + \frac{2}{x^2} \iint_{II} \frac{f_{inf}\, dC\, dE}{\sqrt{E - Cx^{-2} - 1 + z}} +$$

$$+ \frac{2}{x^2} \iint_{III} \frac{f_{fin}\, dC\, dE}{\sqrt{E - Cx^{-2} - 1 + z}},$$

$$n_i(x) = \frac{1}{x^2} \int_0^\infty dC \int_C^\infty \frac{f_i\, dE}{\sqrt{E - Cx^{-2} - z + 1}} + \frac{2}{x^2} \int_0^\infty dC \int_v^C \frac{f_i\, dE}{\sqrt{E - Cx^{-2} - z + 1}}.$$

These distributions, coupled with Poisson's equation, determine the potential distribution around the probe. As a special case a positively charged probe is considered in weakly ionized plasma $\mu^2 \ll 1$, where

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$$\mu^2 \approx \frac{kT}{e\Phi_0} \frac{D}{a} \frac{N_e \sigma_{ea}}{N \sigma_{en}},$$

and an expression is derived for particle distribution function corresponding
to the periodic or finite trajectory particles. "The authors express their
gratitude to S. M. Rytov for his influence on this work." Orig. art. has: 48
equations and 8 figures.

ASSOCIATION: Radiotekhnicheskiy institut AN SSSR (Radio-Technical Institute,
AN SSSR)

SUBMITTED: 16Oct64   ENCL: 00   SUB CODE: ME, GP

NO REF SOV: 007   OTHER: 001

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L 1542-66   EWT(1)/FCC/EWA(h)   GW/GS
ACCESSION NR: AT5023595   UR/0000/65/000/000/0267/0270

AUTHOR: Goryshnik, L. L.; Dyukalov, A. N.   59

TITLE: Amplification of the external electric field on the surface of a large
body in the ionosphere

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow,
1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii.
Moscow, Izd-vo Nauka, 1965, 267-270

TOPIC TAGS: ionosphere, ionosphere electric field, ionosphere electric field
amplification   12

ABSTRACT: An analytical investigation was made of the electric field strength on
the surface of a motionless body within a boundless plasma in the absence of a mag-
netic field, but in the presence of a weak electric field. Such a body would not
affect the overall neutrality of the plasma. The equality of electronic and ionic
currents between the body and the stationary plasma is primarily responsible for the
body's potential. If the photoeffect and the effect of the secondary emission are
disregarded, the body will display a negative potential considerably higher than
that of the mean thermal energy of the electrons, owing to the higher mobility of

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the electrons. A space charge near the body would occur as the result of the presence of positive ions. The thickness of the charged space would be of the order of the Debye radius. Proceeding from the Poisson equation for the distribution of potential effected by a charged body within a layer, the authors determined the densities of charged particles within the space charge and found an equation for the potential distribution for the case at hand. From this the field strength was deduced at the surface of the body under the assumption that the mean energy of the electrons can be considered equal to zero at the surface. Under the assumption that the ion thermal velocity equals its mean value, an equation was deduced for determining the dependence of the field strength on the density of the ionic current and the potential at a point on the surface, and on the thermal energy of the particles on the boundary of the layer and the plasma. Under certain simplifying assumptions, it was concluded that the weak external field depends on the density of the ionic current from the external field at a given point of the surface. The determining factor of the external field $\mu = eE_\perp \Lambda/kT_e$ (e is the electron charge, $E_\perp$ the field strength, and Λ the mean free path of particles), which in the case under consideration is $<< 1$, has different signs at opposite points of the body. It follows from the symmetry of the problem that a disturbance of the surface potential by a weak external field is proportional to $\mu^2\mu$. The amplification factor of a weak external field on the surface of a body in the ionosphere was found to be proportional to the field on the surface of a body in the ionosphere.

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ratio of the free path of the ion to the Debye radius in an undisturbed plasma.
Orig. art. has: 1 figure and 17 formulas.   [FP]

ASSOCIATION: none

SUBMITTED: 02Sep65   ENCL: 00   SUB CODE: ES, EM

NO REF SOV: 004   OTHER: 001   ATD PRESS: 4c94

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L 43679-66   EWT(m)   IJP(c)

ACC NR: AT6017505   (N)   SOURCE CODE: UR/2759/65/000/007/0029/0038

AUTHOR: Voskresenskiy, G. V.; Goryshnik, L. L.; Koroza, V. I.   39

ORG: none   B+1

TITLE: Axial motion of particles in the initial section of a strong focusing linear electron accelerator with constant phase velocity

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli, no. 7, 1965, 29-38

TOPIC TAGS: linear accelerator, phase velocity, RF field, particle motion

ABSTRACT: The calculations of in phase motion of electrons in the initial section with constant phase velocity are limited to two cases. 1) It is assumed that the damping of the RF field is small and the accelerated current remains small. 2) In the second part, it is assumed that the current is large and can become considerably distorted during the accelerating duty cycle. In the first part, it is assumed that the electrons are perfectly bunched in phase and the initial energy is the same for electrons. In this case, the bunches do not spread during the accelerator duty cycle and the "single electron motion" approximation can be applied. A system of equations takes into account the initial spread of momentum of electrons in an interval $\Delta\gamma$ for each group of electrons. The comparison of detailed calculations with the calcula-

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tions in the "one electron" approximation show that there is an agreement of both methods to 1-2%. Orig. art. has: 6 figures, 6 formulas.

SUB CODE: 20/   SUBM DATE: none/   ORIG REF: 002/   OTH REF: 002

mjs

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FILIPPOV, S.N. [deceased]; BEDA, N.I.; ALIMOV, I.G.; RYZHKOV, P.Ya.; LEVIN,
    P.G.; GORYUCHKO, I.G.; ZADOROZHNAYA, M.A.; VOLKOVA, L.A.

    Building up steel rools. Biul. TSNIICHM no.22:54-55 '57.
                                                    (MIRA 11:5)

    1. Zavod im. Petrovskogo.
                        (Electric welding)   (Rolls)